

## Qualitative Causation Coding as an Approach to Uncover the Mechanisms Driving Transformative Change in Racial Equity-Focused Teacher Education Activities

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### Key takeaways:

1. Questions of racial equity-focused teacher development are fundamentally **causal**
2. **Qualitative methods** have a unique role to play in answering these questions
3. **Causation coding** (Saldaña, 2021) is one method for understanding transformative processes in antiracist teacher education

### Background:

Teacher education plays a pivotal role in promoting antiracist teaching (Cochran-Smith et al., 2015), yet much remains unknown about what specific activities ‘work,’ for whom, and under what conditions (Hambacher & Ginn, 2021). Understanding teacher candidates’ experiences of **transformative change** requires causal inquiry. Whereas quantitative causal methods are useful for identifying the consequences of varying a treatment (**causal description**), qualitative approaches to causal inquiry offer unique insights into the process(es) of change, and the role of context in shifts (**causal explanation**) (See: Maxwell, 2004a, 2004b, and 2012). **Qualitative causation coding** (Saldaña, 2021) is well-suited for studying transformative teacher education experiences.

### Causation Coding Methodology:

1. **Antecedents**: what preceded the change?
2. **Mediators**: what occurred during the change?
3. **Local interpretations**: which outcomes were closely related to the activity itself? (e.g., emotional reactions)
4. **Generalized interpretations**: which outcomes extended beyond the activity itself? (e.g., changes in perceptions & practices)
5. **Causal links**: what process(es)/causal chain(s) can we reasonably infer?
6. **Validity checks**: consensus coding, member checking

### Focal Study Using Causation Coding (Parr, 2019)

**Aim:** to better understand *processes of change* (e.g., the antecedents, mediators, and outcomes) in white teacher candidates' learning about race and racism through teacher education activities

**RQ:** *When recounting their experiences of transformative activities, to what do white teacher candidates attribute their emotional reactions and shifts in perceptual frameworks related to equitable practices?*

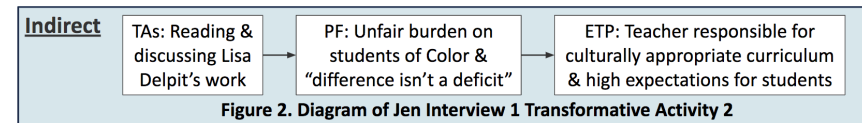
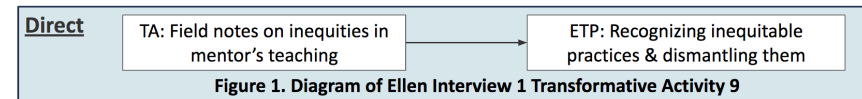
**Methods:**

Sample	Data Collected	Analytic Steps
5 teacher candidates <ul style="list-style-type: none"> <li>All self-identified as white</li> <li>4 women; 1 non-binary</li> <li>4 aged 20-21; 1 aged 40</li> <li>3 in BS/MED program; 2 in MAT program</li> </ul>	1. Pre/post-surveys 2. Pre/post interviews* 3. Weekly diaries  *The only data we used for this study	Phase 1: Descriptive coding ('transformative activities') Phase 2: Causation coding Phase 3: Memoing Phase 4: Member checking

Code label
Biographical factors
Abbreviation: #B
CO-CODE for BF codes
BF: Race OR equity-explicit
BF: Career motivations
BF: Personal characteristics
BF: Social factors
Code network
Abbreviation: CW
CO-CODE for CW codes
CW: Race OR equity-explicit thoughts
CW: Courses enrolled in
Equity in teacher practice
Abbreviation: ETP
ETP: Conceptualizations of equitable practice
ETP: Interpretations of why equitable practice happens/doesn't happen
Field placement
Abbreviation: FP
CO-CODE for FP codes
FP: Race OR equity-explicit thoughts
General program-related information
Abbreviation: GP
CO-CODE for GP codes
GP: Race OR equity-explicit thoughts

Code label
Perceptual Frameworks
Abbreviation: PF
Beliefs
Abbreviation: #
PF-B: Beliefs about race talk
PF-B: Colorblind racial attitudes
PF-B: Deficit thinking
PF-B: Meaning of equity
PF-B: Meaning of racism
PF-B: Meaning of race
PF-B: Meaning of racial equity
PF-B: Poverty disciplining
PF-B: Student emotions
PF-B: Student intelligence
Cognitive processes
Abbreviation: CP
PF-CP: Cognitive flexibility
PF-CP: Inference heuristic
Transformative activity
Abbreviation: TA

Transformative Activity Excerpt #9	Causation Coding Table			
Ellen: And I think the recognizing school practices, societal practices, classroom practices, that reproduce inequity. Like I said, my co-teacher is extremely culturally sensitive and she's traveled all over the world and so, I thought that it was... that she was a very equitable teacher. But then when we've had to do field notes to kind of examine where we saw maybe inequities, and maybe they're just microaggressions, or maybe they're just certain things that are done or said that aren't meant to be hurtful or harmful, but they do create a less equitable classroom. And so, seeing those things and recognizing those things, I know that there are things in myself too, and I think recognizing is the first step to being able to create...	<b>Antecedents</b> she's traveled all over the world	<b>Mediating variables</b> my co-teacher is extremely culturally sensitive + I thought that it was... that she was a very equitable teacher	<b>Local interpretations</b> (experiences/responses) field notes + create a less equitable classroom + seeing those things and recognizing those things + in myself too	<b>Generalized interpretations</b> (applied to perceptual frameworks or teaching practice) recognizing is the first step to being able to create a more equitable classroom + To realize that we all have biases and then to be able to take those out of our teaching.
Interviewer: Right. You need to have that recognition to figure out what to do next.				<b>Interpretation of causal link</b> This participant's co-teacher has "traveled all over the world." So, she thought her co-teacher was "extremely culturally sensitive" and "a very equitable teacher." However, through field notes this participant has seen and recognized things that her co-teacher does that "create a less equitable classroom." She recognizes "that there are things in [herself] too." In thinking about her practice, she identifies "recognizing" as the "first step to being able to create a more equitable classroom." The next step is "to be able to take those out of our teaching."
Ellen: To realize that we all have biases and then to be able to take those out of our teaching.				



Note. TA = Transformative Activity, PF = Perceptual Frameworks, & ETP = Equity in Teacher Practice

### Findings:

Direct and indirect patterns about how transformative activities led to shifts in teachers' perceptual frameworks and practices.

- Direct: Taking field notes and observing her mentor teacher helped Ellen see microaggressions in action and realize that she likely also engages in them; she talked about how recognizing helps her begin to disrupt it.
- Indirect: Reading Lisa Delpit's book helped Jen understand that students of Color should not have to teach white teachers about culturally responsive practice (CRP) and that *difference* does not mean *deficit*. She felt more responsibility to use CRP and maintain high expectations.
- Sometimes, transformative activities only lead to shifts in teacher candidates' perceptual frameworks (and not practices)
  - Activities (e.g., group work, guest speaker) challenged Olivia's personal views; she said she became more open-minded.

Social contexts can play a powerful role in whether teacher candidates shift their perceptual frameworks and practices

- Some teacher candidates received ample support from their mentor teacher and colleagues to regularly reflect on and enact racial equity in the classroom; other candidates received little support. Levels of support seemed to affect the extent to which transformative activities led to changes in perceptual frameworks and practices.

### Discussion & Limitations:

- Causation coding was a powerful method to push our thinking about what is and is not transformative, granted this was a small study with only five white teacher candidates who were just beginning to challenge their race-related thinking
- When engaging in causation coding, the interpretations made are ultimately the researcher's interpretations of the participants' stories. Therefore, it is essential to stay close to the content of the text and avoid overinterpretation, and to take steps to ensure validity like consensus coding and member checking.

### References

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